

Forestry Senior Exam 2022

Select the best answer from the available choices. Use a pencil to fill-in the correct answer choice bubble for the corresponding question number in the General Knowledge Exam section of the Scantron answer sheet. Give this exam booklet to the room monitor when finished.

1. What does a Wood Physicist do?

- A) many jobs, like building and repairing trails
- B) study materials and help make buildings stronger**
- C) identify wood species
- D) care for trees in the communities

2. What is the difference between an Urban Forester and a Forester?

- A) A Forester plants trees and keeps them healthy while an Urban Forester cares for trees in our communities**
- B) A Forester cares for trees in our communities while an Urban Forester plants trees and keeps them healthy
- C) There isn't a difference
- D) A Forester identifies wood species while an Urban Forester samples water from a stream to make sure it is safe

3. In the story "How Baby Bears Chair was Made" what was baby bears role in helping to make the chair?

- A) Baby bear stood back and watched
- B) Baby bear helped mama bear cut down the tree
- C) Baby bear helped papa bear put the parts of the chair together**
- D) Baby bear helped mama bear weave the bark to make a seat

4. In the story "How Baby Bears Chair was Made" the wood that the bear family used to construct the chair was from an oak tree

- A) True**
- B) False

5. Pick the correct definition of habitat structure?

- A) Characteristics of the natural environment such as sunlight, temperature, moisture, and wind
- B) Physical characteristics of the natural environment, such as how many trees there are, how tall they are, and what species they are**
- C) The shrubs, young trees, and plants near the forest floor
- D) Animal or plant species that live in areas that have just had a large disturbance that removed much of the canopy, such as an extreme weather event like a windstorm or a clear-cut timber harvest

KEY KEY KEY KEY

6. What is the goal of most forest management?

- A) **To create diverse structural conditions across a forest so that there is habitat for all types of species, from those that use early successional habitat to those that like mature forest habitat**
- B) To make sure the animals are happy and healthy
- C) To provide medical help to the species in need
- D) None of the above

7. What job title is being described? A(n) _____ Samples water from a stream to make sure that it is safe.

- A) Volunteer
- B) Naturalist
- C) **Ecologist**
- D) Logger

8. What word matches this definition? The amount of sky obscured by the leaves and branches of the top layer of trees in the forest, measured as a percent.

- A) Clear cut
- B) Early successional
- C) Ground cover
- D) **Canopy cover**

9. What characteristic(s) describe a mature forest?

- A) Covered by a deep layer of leaves
- B) Dark
- C) Cool in temperature
- D) **All of the above**

10. Why is it important to practice timber harvesting and forest management?

- A) It can help conserve biodiversity, promote important ecosystem process and maintain ecosystem resilience
- B) It can help promote regeneration of shade intolerant trees by removing the canopy and increasing sunlight levels
- C) **Both A and B**
- D) It can help with animal nutrition by removing all of the bad things that they could have been eating

11. In what ways does a shrub differ from a tree?

- A) A shrub has several or many stems
- B) A shrub is usually less than 20 ft tall
- C) Shrubs tend to form in a clump shape and do not have a well-defined crown
- D) **All of the above**

KEY KEY KEY KEY

12. The crown of a tree includes twigs, buds, leaves, flowers, and fruits

- A) **True**
- B) False

13. The trunk of a tree is considered which of the following?

- A) Internode
- B) **Bole**
- C) Crown
- D) Root

14. Which of the following is false about cambium cells?

- A) Cambium cells live between wood and bark cells and are visible only with a magnifying glass
- B) Cambium growth widens tree trunks, limbs, and roots
- C) Cambium cells divide forming wood cells toward the center of the tree and bark cells toward the outside
- D) **Cambium cells carry food made in the leaves to the twigs, branches, trunk, and roots**

15. Cones, beans, and nuts are not considered tree fruits

- A) True
- B) **False**

16. What term is being described: a short piece of a strong branch or stem of the past season's growth

- A) Clippings
- B) Cambium
- C) **Cuttings**
- D) Cones

17. Which of the following is not an artificial reproductive method?

- A) **Pruning**
- B) Budding and Grafting
- C) Cuttings
- D) All of the above are artificial reproductive methods

18. A naturalist helps park visitors with many things like identifying birds

- A) **True**
- B) False

19. What was the main point of the Hardwood Ecosystem Experiment?

- A) To cut down trees
- B) **To study different ways to manage forests**
- C) To take care of wildlife
- D) To build rivers

KEY KEY KEY KEY

20. The characteristics of the natural environment such as sunlight, temperature, moisture and wind are considered to be habitat conditions

- A) **True**
- B) False

21. Which of the following is a symptom of herbicide damage?

- A) **Blackened stems**
- B) Striped stems
- C) Red colored leaves
- D) Brown tipped leaves

22. What is often the first damage a grower encounters in a young hardwood plantation?

- A) Herbicide damage
- B) **Frost damage**
- C) Soil compaction
- D) Sunscald

23. There are 23 species of voles in the United States, how many of those species can cause damage to trees in the Midwest?

- A) 5
- B) 12
- C) 8
- D) **2**

24. What role does phloem play in tree growth?

- A) Carries water and nutrients, or sap, from the roots to the leaves
- B) Strengthens the trunk
- C) **Carries the food made in the leaves to the twigs, branches, trunk, and roots**
- D) Cells divide forming bark outside and wood inside

25. What is the ideal soil pH range for growing trees?

- A) 5.1-6.0
- B) 7.9-9.8
- C) **6.5-7.2**
- D) 4.7-5.0

26. What does the acronym NHLA stand for?

- A) National Healthy Land Association
- B) **National Hardwood Lumber Association**
- C) Native Hardwood Lumber Act
- D) Native Hardwood Location Association

27. What is it called when wood has springwood and summerwood pores about the same size?

- A) **Diffuse-porous**
- B) Semi-ring-porous
- C) Largely-porous
- D) Ring-porous

28. What is the purpose of parenchyma cells?

- A) Give color to the tree
- B) Store water
- C) **Store food**
- D) Both B and C

29. Which is not one of the Ecosystem Experiments (HHE) main objectives?

- A) to develop forest management strategies that can be used to maintain and restore oak and hickory forests
- B) to understand the impacts of these forest management strategies on ecological communities, particularly plants, birds, mammals, reptiles, amphibians, and insects
- C) to assess the impacts of alternate forest management approaches on local human communities
- D) to provide novel educational and outreach opportunities for the public to become more knowledgeable about forest ecology and more engaged in forest management issues
- E) **All the above are objectives of the Ecosystem Experiments main objectives**

30. Which is the correct order of the cross section of a tree trunk from the outer layer to the inner layer?

- A) Outer bark, heartwood, inner bark, sapwood, pith
- B) **Outer bark, inner bark, sapwood, heartwood, pith**
- C) Inner bark, outer bark, heartwood, pith, sapwood
- D) Sapwood, heartwood, inner bark, outer bark, pith

31. What is the best way to reduce the impact of sunscald?

- A) **Prevention**
- B) Pruning
- C) Spraying
- D) Logging

32. Which of the following is not considered to be a tree injury?

- A) Tractor Blight
- B) Drought
- C) Salt
- D) **Over conditioning**

KEY KEY KEY KEY

33. The leaves of the sweetgum trees can be described as. glossy; resembles a star, aromatic when crushed; margins are finely toothed

- A) **True**
- B) False

34. Which of the following describes the fruit/seeds of the sugar maple tree?

- A) **greenish, paired fruit, each winged seed sits close to the other**
- B) round deep red to purple berries
- C) males reddish green and sit upright; females hang down in drooping long-stalked round heads
- D) greenish, disk-like, paper-thin, half-inch samaras with hairs on the margins

35. The purpose of pruning is to train trees to a single straight stem and develop more valuable, knot-free trunks

- A) **True**
- B) False

36. Wood rays can be described as ribbon- like streaks or lines running across the annual rings from the center of the tree to the outside

- A) **True**
- B) False

37. How many log scaling rules are there in the United States?

- A) **Over 95**
- B) Over 67
- C) Over 35
- D) Over 90

38. Which of the following is the most widely recognized scaling rule?

- A) Scribner Rule
- B) International rule
- C) **Doyle rule**
- D) United States rule

39. Which of the following is/are the main type(s) of nursery operation(s) of hardwood seedlings?

- A) Bareroot
- B) Containerized
- C) **Both A and B**
- D) Nursing
- E) Both C and D

40. What is the first step in tree pruning?

- A) suppression or removal of lower limbs, or vigorous branches that are growing upward into the canopy
- B) to remove any dead, broken, diseased, or dying branches**
- C) identify the main stem or leader, any branches that will compete with it, and decide how much of the competing stems should be removed
- D) none of the above is the first step in tree pruning

41. No more than 30 - 35% of foliage should be removed each year when pruning.

- A) True
- B) False**

42. Which of the following is not an invasive species in a hardwood tree plantation?

- A) Autumn olive
- B) Black locust
- C) Brittlestem Hempenettle
- D) all of the following are invasive species**

43. Approximately how many tree species are native to the midwestern states?

- A) 200
- B) 150
- C) 100**
- D) 50

44. What are the main uses of an ash tree?

- A) handles, furniture, kitchen cabinets, athletic equipment, face veneer**
- B) pulpwood, matches, pallets and crates, particle board, corestock for plywood
- C) Concealed furniture parts, food containers, corestock for plywood, millwork
- D) Concealed furniture parts, woodenware and novelties, toys, crossties, handles, crates and pallets

45. Which of these is NOT a perennial tree?

- A) Boxelder
- B) Chocolate vine**
- C) Tree of heaven
- D) Norway Maple

46. What is a good way to determine a common Indiana wood?

- A) Color
- B) Hardness
- C) Figure
- D) All of the above**

KEY KEY KEY KEY

47. Oak logs of the color _____ are highly sought after?

- A) **Red**
- B) Brown
- C) Black
- D) Tan

48. Satisfactory timber sales are a result of _____.

- A) Marketing
- B) **Planning**
- C) Harvesting
- D) Selection

49. Organic fertilizers are applied to seedlings in nurseries?

- A) True
- B) **False**

50. Which state has woods more suitable for coniferous forests than for cities?

- A) **Minnesota**
- B) North Carolina
- C) North Dakota
- D) Indiana